REMARKS

Claims 1-10, 13-25, 28-68, 98, 99 and 101-127 are pending. Claims 101-124 are withdrawn.

Claim 1 is amended as follows:

(a) introducing a lower-limit for the Mg-content of 1.92%;

(b) introducing a new upper-limit for the Zn-content of 7.43%;

(c) amending the Zr-content to be present in the range of 0.04 – 0.3%.

Amendment (a) is supported by dependent claim 27. Amendment (b) is supported by the disclosure content provided on page 7 [0032] of the application. Amendment (c) is supported by a combination of dependent claims 11 and 13.

New Claim 125 recites a lower-limit for the Zn-content of 7.2% (see page 7, paragraph [0032], of the application) and dependent claim 69.

Claim 126 recites an upper-limit for the Mg-content of 2.1% (see original claim 7).

Claim 127 recites a range for the Mg-content of 1.92 to 1.97% (see page 7, [0033], of the application).

I. Claim Interpretation

Applicants thank the Examiner for renumbering the claims.

II. Election/Restriction

Applicants acknowledge the restriction requirement has been made final.

III. 35 USC §102/103

A. Chakrabarti et al. (US 2002/0121319 A1)

Claims 1, 5-16, 18, 19, 23, 24, 28-40 and 98 are rejected under 35 USC §102(b) or in the alternative under 35 USC §103(a) as being unpatentable over Chakrabarti et al. (US 2002/0121319 A1).

It is respectfully submitted the present amendment to Claim 1, regarding the Mg-content upper limit from Claim 7, overcomes the rejection raised over Chakrabarti et al. Chakrabarti et al. discloses an upper-limit for the Mg-content of 1.9 wt. % (see Chakrabarti et al. paragraph [0023]). Thus, there is no overlap with Chakrabarti et al.

Chakrabarti et al. discloses a Mg-content in the range of 1.2-1.9 wt. % which is below the claimed lower-limit for the Mg content. Furthermore, Chakrabarti et al. teaches the skilled addressee that lower Mg contents are preferred, and preferably the upper-limit for the Mg content is 1.68 wt. % (see page 5, [0031], of Chakrabarti et al.). Also, the examples supporting the alloy development of Chakrabarti et al. all have a Mg content of about 1.5 wt. % (see Table 2 on page 7 of Chakrabarti et al.). Paragraph [0066] on page 8 of Chakrabarti et al. mentions the highest strength-toughness properties were obtained at some of the leanest Cu and Mg levels used. Thus, the teaching of Chakrabarti et al. as a whole directs the skilled addressee to a Mg level of less than 1.9 wt.%, and more preferably to a level of less than 1.68 wt.%.

B. Fridlyander et al. (US 2004/0101434 A1)

Claims 1-18, 20-36, 40 and 98 are rejected under 35 USC §102(b) or in the alternative under 35 USC §103(a) as being unpatentable over Fridlyander et al. (US 2004/0101434 A1).

It is respectfully submitted the present amendment to claim 1 regarding the Zn-content lower limit from Claim 69 overcomes the objection raised over Fridlyander et al. (US-2004/0101434), disclosing a lower-limit for the Zn-content of 7.6 wt.%.

IV. 35 USC §103(a)

A. Chakrabarti et al.

Claims 2-4, 15-27, 41-97, 99 and 100 are rejected under 35 USC §103a) as being unpatentable over Chakrabarti et al.

It is respectfully submitted the above-described amendment to claim 1 regarding the Mg-content upper limit from Claim 7 overcomes this rejection.

The outstanding Office action at section 7 on page 6 asserts “Because of the overlap, it is held that Chakrabarti et al. has created a prima facie case of obviousness of the presently claimed invention”. With the present claim amendments the overlap has been removed, and the applicant respectfully submits for that reason the obviousness objection as presented in the Office Action is overcome.

As explained above, Chakrabarti et al. discloses a Mg-content in the range of

1.2-1.9 wt. % which is below the claimed lower-limit for the Mg content. Furthermore, Chakrabarti et al. teaches the skilled addressee that lower Mg contents are preferred, and preferably the upper-limit for the Mg content is 1.68 wt. % (see page 5, [0031], of Chakrabarti et al.). Also, the examples supporting the alloy development of Chakrabarti et al. all have a Mg content of about 1.5 wt. % (see Table 2 on page 7 of Chakrabarti et al.). Paragraph [0066] on page 8 of Chakrabarti et al. mentions the highest strength-toughness properties were obtained at some of the leanest Cu and Mg levels used. Thus, the teaching of Chakrabarti et al. as a whole directs the skilled addressee to a Mg level of less than 1.9 wt.%, and more preferably to a level of less than 1.68 wt.%.

Furthermore, Example 6 on page 27 of the present application, shows an alloy A having an alloy composition within the range of D1. Whereas the alloy B is an alloy falling within the present claimed range, and both alloys have been processed in a similar manner. From this Example 6 it is evident that the alloy product according to the present invention (alloy B) has a significantly improved toughness compared to alloy A, compare for example the UPE results of Table 10 on page 28 of the present application.

Also, the same results are illustrated in Example 8 on pages 30 to 31 of the present application, wherein alloy E would fall within the compositional ranges disclosed in Chakrabarti et al., whereas alloy F falls within the compositional range of the new claim 1. Again this example shows improved properties are obtained, including the elongation in ST-direction (see Table 15 on page 31 of the present application) being an important engineering parameter, compared to the alloy E.

Thus, there is no motivation within Chakrabarti et al. to move the alloy composition towards a composition as presently claimed, while achieving an improved set of desirable engineering properties. To state otherwise would be unallowable ex post facto analysis.

B. Fridlyander et al.

Claims 19, 37-39, 41-97, 99 and 100 are rejected under 35 USC §103(a) as being unpatentable over Fridlyander et al.

It is respectfully submitted the above-described amendment to claim 1 regarding the Zn-content lower limit from claim 69 overcomes the objection raised over Fridlyander

et al. (US-2004/0101434), disclosing a lower-limit for the Zn-content of 7.6 wt.%.

The Office Action at section 8 on page 7 raises an objection in view of Fridlyander et al. However, Fridlyander et al. teaches a Zn-content in a range of 7.6 to 8.6%. There is no motivation for the skilled addressee to lower the Zn-content as done for the present invention.

In the meantime, the alloy product according to the present invention has achieved commercial success as it is under qualification with various aircraft producers. This is evidence of commercial success which is an accepted indicator for non-obviousness.

Furthermore, Aleris Aluminum Koblenz (previously Corus Aluminium Walzprodukte), the assignee of the present application, registered alloy AA7081 with the Aluminium Association in May 2005. The registered limits are (main alloy elements, and in wt. %):

Zn	6.9 – 7.5
Cu	1.2 – 1.8
Mg	1.8 – 2.2
Zr	0.06 – 0.15
Mn	max. 0.25
Cr	max. 0.04

These are the outer-limits for these elements, whereas the preferred composition is narrower and somewhat near the center of the ranges, and close to various examples according to the invention set out in the present application.

V. Conclusion

For the above reasons it is respectfully submitted the invention as presently claimed is both novel and inventive over the cited prior art documents.

In view of the above it is respectfully submitted all objections and rejections are overcome. Thus, a Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date: November 26, 2007 By: _____

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